UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/040,578	12/28/2001	David J. Long	50277-1766	3641

42425	7590	08/12/2005

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ART UNIT	PAPER NUMBER
2192	

DATE MAILED: 08/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *16 May 2005*.

2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-32* is/are pending in the application.

     4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *1-32* is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

     a) ☐ All b) ☐ Some * c) ☐ None of:

       1. ☐ Certified copies of the priority documents have been received.

       2. ☐ Certified copies of the priority documents have been received in Application No. _____.

       3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

     * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date *04/18/05 & 03/28/05*.

4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____ .

DETAILED ACTION

1.   This action is responsive to Amendment filed on May 16th 2005. Claims 1, 13, 17, 29,

and 32 have been amended. Claims 1-32 are presented for examination.

Response to Amendment

2.   In view of the amendment of claims 13, 29, and 32 to overcome rejection of claims under

35 USC 112, second paragraph, rejection of claims under 35 USC 112, second paragraph

is hereby withdrawn.

Response to Arguments

3.   Applicant's arguments with respect to claims 1-32 have been considered but are moot in

view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

4.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless —

*(e) the invention was described in (1) an application for patent, published under section
122(b), by another filed in the United States before the invention by the applicant for
patent or (2) a patent granted on an application for patent by another filed in the United
States before the invention by the applicant for patent, except that an international
application filed under the treaty defined in section 351(a) shall have the effects for
purposes of this subsection of an application filed in the United States only if the
international application designated the United States and was published under Article
21(2) of such treaty in the English language.*

5.   Claims 1-15, 17-31 are rejected under 35 U.S.C. 102(e) as being anticipated by Ng et al.

(US 6385618 B1, hereinafter *Ng et al.*).

Claim 1

Ng et al. teach a method of specifying a structure (see at least *116* FIG.1 & associated

text; *collection Orders_for_Customer* FIG.4B & associated text), within a computer system (see

at least *100* FIG.1 & associated text), of an instance of a class (see at least *table, rows, customer

information, customer table* col.1:60-col.2:11; *int Cust_id; 420* FIG.4B & associated text), the

method including the step of:

  o   associating with said instance of said class an attribute that is not in said class or any

       superclass of said class (see at least *collection Orders_for_Customer; int Cust_id; 420

       FIG.4B & associated text), thereby establishing for said instance said structure that

       includes storage for data associated with said attribute (see at least *collection

       Orders_for_Customer; int Cust_id; 420* FIG.4B & associated text); and

  o   wherein associating said attribute with said instance does not cause said attribute to

       become an attribute of said class (see at least *Class 420, customer table 202, collection of

       objects, orders, particular customer, grouping of instances* col.6:30-67).

Claim 2

The rejection of base claim 1 is incorporated. *Ng et al.* further teach wherein the step of

associating further includes the steps of:

   o establishing a property bundle that is associated with one or more attributes that are not in

said class or any super class of said class (see at least *collection Orders_for_Customer;*

int Cust_id; 420 FIG.4B & associated text; *customer 302, foreign key 306, order 304*

FIG.3 & associated text); and

   o associating said instance with said property bundle (see at least *collection*

Orders_for_Customer; int Cust_id; 420 FIG.4B & associated text; *customer 302, foreign*

key 306, order 304 FIG.3 & associated text).

Claim 3

The rejection of base claim 2 is incorporated. *Ng et al.* further teaches storing within a

relational database, objects that define said instance, said property bundle, and said one or more

attributes (see at least *relational database, tables, rows, customer table* col.1:60-col.2:11).

Claim 4

The rejection of base claim 1 is incorporated. *Ng et al.* further teaches maintaining an

object relational mapping system that indicates a correlation between said instance and data

stored in a relational database (see at least *object-relational mapping tools, relational database,*

tables, rows, customer table, order table col.1:60-col.2:11).

Claim 5

The rejection of base claim 1 is incorporated. *Ng et al.* further teach wherein said step of associating includes establishing a pointer from said instance to a property bundle (see at least *310* FIG.3 & associated text; *iterator getOrdersForCustomer()* FIG.4B & associated text).

Claim 6

The rejection of base claim 5 is incorporated. *Ng et al.* further teach wherein said step of associating includes establishing a pointer from said attribute to said property bundle (see at least *Class Order 424, int Order_id, Customer_for_Order* FIG.4B & associated text).

Claim 7

The rejection of base claim 1 is incorporated. *Ng et al.* further teach wherein a property class contains said attribute (see at least *Class Order 424* FIG.4B & associated text).

Claim 8

The rejection of base claim 1 is incorporated. *Ng et al.* further teaches associating a key with said attribute wherein said key identifies said attribute (see at least *Class Order 424, int Order_ID, str Date* FIG.4B & associated text).

Claim 9

The rejection of base claim 8 is incorporated. *Ng et al.* further teaches wherein said key is a user-defined key (see at least *Class Order 424, int Order_ID, str Date* FIG.4B & associated text; *programmer, customization* col.6:5-30).

Claim 10

The rejection of base claim 1 is incorporated. *Ng et al.* further teaches maintaining a table that includes an entry that indicates that said instance is associated with said attribute (see at least *Class 420, customer table 202, collection of objects, orders, particular customer, grouping of instances* col.6:30-67).

Claim 11

The rejection of base claim 10 is incorporated. *Ng et al.* also further teaches maintaining said entry to include a key that identifies said attribute (see at least *Class Order 424, int Order_ID, str Date* FIG.4B & associated text).

Claim 12

The rejection of base claim 10 is incorporated. *Ng et al.* further teaches maintaining said table externally to said instance (see at least *Class 420, customer table 202* col.6:30-67).

Claim 13

The rejection of base claim 10 is incorporated. *Ng et al.* further teaches maintaining said table internally to said instance (see at least *Class 420, customer table 202, collection of objects, orders, particular customer, grouping of instances* col.6:30-67; *customer 302, hash table 310* FIG.3 & associated text).

Claim 14

The rejection of base claim 1 is incorporated. *Ng et al.* further teaches storing into said

instance a hash table; and locating an entry in said hash table for said attribute (see at least

customer 302, hash table 310 FIG.3 & associated text).

Claim 15

The rejection of base claim 14 is incorporated. *Ng et al.* do not expressly disclose

receiving data that is designated as a key for locating said entry in said hash table; and

using said data as said key to locate said entry without determining whether said data

conforms to software rules. However, this feature is deemed inherent in the teaching of *Ng et al.*

since the retrieval of data stored in a hash table requires receiving a key value by which a key

comparison can be made by the hash table's search algorithm.

Claim 17

Ng et al. disclose a computer-readable medium (see at least *104* FIG.1 & associated text)

carrying instructions (see at least *114* FIG.1 & associated text) for specifying a structure (see at

least *116* FIG.1 & associated text; *collection Orders_for_Customer* FIG.4B & associated text),

within a computer system (see at least *100* FIG.1 & associated text), of an instance of a class (see

at least *table, rows, customer information, customer table* col.1:60-col.2:11; *int Cust_id; 420*

FIG.4B & associated text), the instructions including instructions for performing the step of:

   o   associating with said instance of said class an attribute that is not in said class or any

        superclass of said class (see at least *collection Orders_for_Customer; int Cust_id; 420*

FIG.4B & associated text), thereby establishing for said instance said structure that

includes storage for data associated with said attribute (see at least *collection*

Orders_for_Customer; int Cust_id; 420 FIG.4B & associated text); and

o   wherein associating said attribute with said instance does not cause said attribute to

become an attribute of said class (see at least *Class 420, customer table 202, collection of*

objects, orders, particular customer, grouping of instances col.6:30-67).

Claims 18-31

Claims recite limitations, which have been addressed in claims 2-15, therefore, are

rejected for the same reasons as cited in claims 2-15.

Claim Rejections - 35 USC § 103

6.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action: ·

(a) A patent may not be obtained though the invention is not identically disclosed or
described as set forth in section 102 of this title, if the differences between the subject
matter sought to be patented and the prior art are such that the subject matter as a whole
would have been obvious at the time the invention was made to a person having ordinary
skill in the art to which said subject matter pertains. Patentability shall not be negatived
by the manner in which the invention was made.

7.   Claims 16, and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Ng et*

al. in view of The Java Virtual Machine Specification (The class File Format,

<http://java.sun.com/docs/books/vmspec/html/ClassFile.doc.html>), hereinafter, *JVM*

Spec.

Claim 16

The rejection of base claim 1 is incorporated. *Ng et al.* do not expressly disclose wherein

the class is a file type and said instance is a tile of said file type in a file system wherein the step

of associating includes associating with said file of said file type an attribute that is not

associated with said file type or any super class of said file type. However, *JVM Spec* discloses a

class is a file type and said instance is a file of said file type in a file system (e.g., see *section 4.1*

ClassFile pages 1-6) wherein the step of associating includes associating with said file of said

file type an attribute that is not associated with said file type or any super class of said file type

(e.g., see section *fields[]* page 5). It would have been obvious to one of ordinary skill in the

pertinent art at the time the invention was made to incorporate the teaching of *JVM Spec* into that

of *Ng et al.* for the inclusion of an instance of a file type. And the motivation for doing so would

have been to enable class analysis (without loading the class) and synthesis.

Claim 32

The rejection of base claim 17 is incorporated. Claim recites limitations, which have

been addressed in claim 16, therefore, is rejected for the same reasons as cited in claim 16.

Conclusion

8.   Applicant's amendment necessitated the new ground(s) of rejection presented in this

Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37

CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the

advisory action. In no event, however, will the statutory period for reply expire later than

SIX MONTHS from the date of this final action.

9.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Chrystine Pham whose telephone number is 571-272-

3702. The examiner can normally be reached on Mon-Fri, 8:30am-5pm.

        If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Tuan Q. Dam can be reached on 571-272-3695. The fax phone number for

the organization where this application or proceeding is assigned is 703-872-9306.

        Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR. Status

information for unpublished applications is available through Private PAIR only. For

more information about the PAIR system, see http://pair-direct.uspto.gov. Should you

have questions on access to the Private PAIR system, contact the Electronic Business

Center (EBC) at 866-217-9197 (toll-free).

CP
August 7, 2005   **TUAN DAM**
                                              SUPERVISORY PATENT EXAMINER